APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,930	11/30/2001	Yoshio Takahashi	2001-1458A	8810

513	7590	06/30/2005	EXAMINER

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

	MISLEH, JUSTIN P

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.
09/937,930</td><td>Applicant(s)
TAKAHASHI ET AL.</td></tr>
<tr><td>Examiner
Justin P. Misleh</td><td>Art Unit
2612</td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>2</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☐ This action is non-final.

3)☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25 - 41* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) ~~25-41~~ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) 25-41 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *COPY 1/21/05.*

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Specification

1.   The substitute specification filed 21 January 2005 is acknowledged and accepted by the

Examiner. Accordingly, the substitute specification will be entered.

Claim Objections

2.   **Claims 25 – 41** are objected to because of the following informalities: inconsistent

language and lack of clarity and precision. Due the numerous informalities of the types

identified above, the Examiner will NOT detail the specific informalities in each of the claims.

However, amended **Claims 25 – 27** are exemplary and are detailed below.

3.   **Claim 2** recites therein, "a stepwise difference in density between image signals which

are respectively read by adjacent chips of said image reading unit, which comprise a plurality of

read pixels and which have different reading sensitivities". The above limitation lacks clarity

and precision because the language fails to identify that each of the plurality of chips comprises a

plurality of read pixels and each have different reading sensitivities. To overcome the objection,

the following language should be used: "a stepwise difference in density between image signals

which are respectively read by adjacent chips of said image reading unit, wherein said plurality

of chips each comprise a plurality of read pixels and have different reading sensitivities.

Furthermore, **Claim 2** recites in several instances, "said image input apparatus is operable to

[successively calculate; compensate; calculate]", which the Examiner also believes lacks clarity

and precision for failing to actively identify a feature of the image input apparatus. The

Examiner recommends the following changes: "said image input apparatus [successively calculates; compensates; calculates]". Finally, **Claim 24** recites, "has gamma compensation value for only one chip from among the plurality of chips as a reference chip" and "compensate the image signals for the reference chip and other chips by employing the gamma compensation value", which the Examiner believes lacks clarity and precision because the language fails to identify the one chip being the reference chip and fails to even introduce other chips prior to referring to the other chips. The Examiner recommends the following changes: "has gamma compensation value for only one chip, from among the plurality of chips, to be used as a reference chip" and "compensates the image signals for the plurality of chips by employing the gamma compensation value of the reference chip".

4.   **Claim 26** presents the same types of informalities as Claim 24, wherein the Examiner recommends the following corrected language: "said image input apparatus calculates the stepwise difference in density of the image signals between the adjacent chips for image data which has been compensated by employing the gamma compensation value of the reference chip, and said image input apparatus uniformly adds the stepwise difference in density to the plurality of chips except for the reference chip."

5.   **Claim 27** presents the same types of informalities as Claims 24 and 25, wherein the Examiner recommends the following corrected language: "said image input apparatus calculates the stepwise difference in density of the image signals between the adjacent chips for image data which has been compensated by employing the gamma compensation value of the reference chip, and said image input apparatus adds the stepwise difference in density to said plurality of

read pixels in stages for the plurality of chips except for the reference chip an end of the plurality

of chips.

6.   **APPROPRIATE CORRECTION IS REQUIRED.** The informalities and recommend

changes detailed above are not meant to be all-inclusive; rather, the Examiner has merely

provided examples to be used as guidelines for all corrections. Furthermore, while the Examiner

has only provided examples from a few claims, Applicant is strongly encouraged to thoroughly

review all claims for language that is inconsistent and lacks clarity and precision such that the

claims clearly and distinctly point out what Applicant regards as his/her invention.

Allowable Subject Matter

7.   **Claims 25 – 41** are allowed.

8.   The closest prior art (Lin et al.) teach a method for calibrating a multi-chip image sensor,

and an imaging system having a multi-chip sensor that includes color correction factors

generated by such a method. The image sensor is successively controlled to image three

different test targets. After imaging each target, a set of correction factors is generated and used

to correct image signals generated when imaging the next test target. A first set of correction

factors corrects for pixel-to-pixel variations between imaging elements in the array. The second

set of correction factors corrects for chip-to-chip variations between chips in the array. The third

set of correction factors corrects for array-wide variations compared to a standard color chart.

       However, the closest prior art does not teach or fairly suggest a gamma compensation

value only for one chip among the plural chips as a reference, and compensating the image

signals for the chip as the reference and other chips by employing the gamma compensation

value; calculating the compensation values where the mean of the differences of the pixel data on

the chip boundaries for several lines is calculated and the difference exceeds a threshold value,

wherein the difference value is excluded from the calculation of the mean; calculating the

compensation values where the calculation of the stepwise difference in density between the ·

image signals is started after being delayed from a real reading start by the number of lines

which are required for calculating the mean value of the stepwise differences in density between

the image signals; a density stepwise difference correcting means for not correcting the

calculated stepwise difference in density when the calculated stepwise difference exceeds a

predetermined threshold; wherein the stepwise difference in density is calculated from a mean of

a plurality of pre-reading signals and applying compensation values to an intermittent region

which is not to be read; and when real-time screen display of an input image is performed, the

screen display is performed from a line which has been subjected to the addition of the stepwise

difference in density between the chips.

Conclusion

Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The

Examiner can normally be reached on Monday through Thursday from 7:30 AM to 5:00 PM and
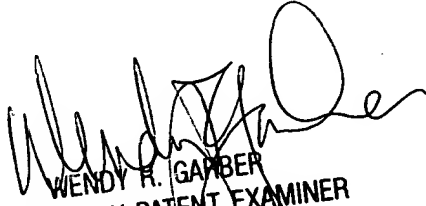
on alternating Fridays from 8:00 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Wendy R Garber can be reached on 571.272.7308. The fax phone number for the

organization where this application or proceeding is assigned is 703.872.9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
June 24, 2005

WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600